



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

Ayazi, et al.

Serial No.: 10/669,178

Filed: September 23, 2003

Confirmation No.:

Group Art Unit:

Examiner:

Docket No.: 62020-1450

For: Electrically Coupled Micro-Electro-Mechanical Filter Systems and Methods

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Sir:

This information disclosure statement is filed in accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, and specifically:

- ☒ under 37 CFR 1.97(b), or  
(within Three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement Under 37 C.F.R. 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before the final office action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:  
☐ Statement under 37 CFR 1.97(e), and  
☐ a \$180.00 petition fee set forth in 37 CFR 1.17(p).  
(Filed after final office action or notice of allowance, whichever occurs first, but before payment of the issue fee)

At any time during the pendency of this application, please charge any fees required to Deposit Account 20-0778 pursuant to 37 CFR 1.25. The Commissioner is hereby requested to credit any overpayment to Deposit Account No. 20-0778.

- ☒ Applicant(s) submit herewith *Form PTO 1449A - Information Disclosure Statement by Applicant* together with copies (where required) of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may or may not be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56. As required by 37 C.F.R. §1.98(a), a legible copy of each document is provided.
- ☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on the form PTO 1449 and is enclosed herewith.



The following rights are reserved by the Applicant(s): the right to establish the patentability of the claimed invention over any of the listed documents should they be applied as reference, and/or the right to prove that some of these documents may not be prior art, and/or the right to prove that some of these documents may not be enabling for the teachings they purport to offer.

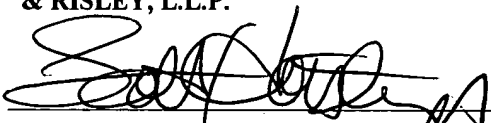
This statement should not be construed as a representation that an exhaustive search has been made, or that information more material to the examination of the present application does not exist. Any statements or identifications regarding the relevance of any portion(s) of cited references should not be construed as a representation that the most relevant portion(s) have been identified, and the absence of such statements or identifications should not be construed as representations that there are no relevant portion(s). The Examiner is specifically requested not to rely solely on the materials submitted herewith. The Examiner is requested to conduct an independent and thorough review of the documents, and to form independent opinions as to their significance.

It is requested that the information disclosed herein be made of record in this application and that the Examiner initial and return a copy of the enclosed PTO-1449 to indicate the documents have been considered.

Respectfully Submitted,

THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.

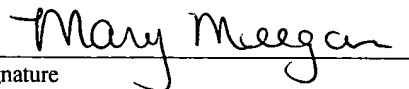
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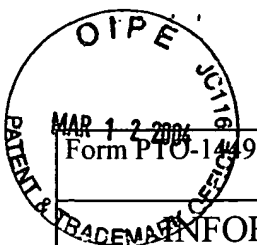
  
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**CERTIFIED MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as "First Class Mail," in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 3-10-04.

  
Signature



Form PTO-1449				Attorney Docket No. 62020-1450		Serial No. 10/669,178	
INFORMATION DISCLOSURE CITATION				Applicant Ayazi, et al.			
(Use several sheets if necessary)				Filing Date September 23, 2003		Group	
U.S. PATENT DOCUMENTS							
Examiner Initials	Item	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A	6,549,099	4-15-03	Taussig	333	186	6-29-01
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
	B	WO 02/01717 A1	1/3/02	PCT			Abstract
	C	WO 03/043189 A2		PCT			Abstract
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
	D	Galayko, D., Kaiser, A., Buchailot, L. et al. (2003) Microelectromechanical Variable-Bandwidth IF Frequency Filters With Tunable Electrostatic Coupling Spring. IEEE., pp. 153-156					
	E	No, S.Y., Hashimura, A., Pourkamali, S. et al., Single-Crystal Silicon HARPSS Capacitive Resonators with Submicron Gap-Spacing, School of Electrical and Computer Engineering, Georgia Institute of Technology, GA; for proceedings at Hilton Head 2002.					
	F	Pourkamali, S., Abdolvand, R., Hashimura, A. et al. HARPSS Single Crystal Silicon Filter Arrays. School of Electrical and Computer Engineering, Georgia Institute of Technology, GA.					
	G	Wang, K., Bannon, F.D., Clark, J.R. et al. (1997) Q-Enhancement of Microelectromechanical Filters Via Low-Velocity Spring Coupling., Proceedings, IEEE International Ultrasonics Symposium, Toronto, Canada, Oct. 5-8, 1997, pp. 323-327.					
	H	Wang, K. and Nguyen, T.C. (1997) High-Order Micromechanical Electronic Filters, Proceedings, IEEE International Micro Electro Mechanical Systems Workshop, Nagoya, Japan, Jan. 26-30, 1997, pp. 25-30.					
	I	Pourkamali, et al. A 600kHz Electrically-Coupled MEMS Bandpass Filter, School of Electrical and Computer Engineering, Georgia Institute of Technology, GA, MEMS 2003 Conference, Kyoto Japan, Jan. 19-23, 2003.					
	J	Pourkamali, et al. Electrostatically Coupled Micromechanical Beam Filters, School of Electrical and Computer Engineering, Georgia Institute of Technology, GA, MEMS 2003 Conference, Kyoto, Japan, Jan. 19-23, 2003, Pages 702-705.					
	K	Ayazi, Farrokh, et al., Capacitive Resonators And Methods Of Fabrication, filed with the USPTO on July 31, 2003, having serial no. 10/632,176.					
* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							
EXAMINER'S SIGNATURE:				DATE CONSIDERED:			
Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE							